

# **TRANSPORTATION MODE COUNT STUDY**

**OCTOBER 21, 2004**



**KEY WEST PLANNING DEPARTMENT**

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# KEY WEST TRANSPORTATION MODE COUNT STUDY

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## INTRODUCTION

The *Transportation Mode Count Study* is an essential part of the multimodal planning effort being pursued by the City of Key West. Currently, portions of Key West have been designed so that people wishing to go to the store or commute to work have no other option than to drive cars. Over the years, traffic congestion has been increasing partly because land use and transportation decisions have forced people to use automobiles for all trips. The goal of the multimodal planning effort is to address the increasing automobile traffic in Key West by planning for transportation options for residents and visitors other than the personal automobile.

The increased traffic has been documented in *The Steady Increase of Traffic in Key West* report by the Planning Department dated July 15, 2004. A related study, the September 20, 2004, *Visitor Transportation Survey*, documents the preferred modes of travel for overnight guests staying at hotels. The *Transportation Mode Count Study* is the latest effort aimed at understanding and addressing the congestion problem in Key West.

## PURPOSE

The purpose of this study is to observe the actual volume on different roadways to understand transportation mode volumes and paths that users of the modes prefer. To accomplish this goal, this study counts the number of automobiles, trucks, taxis, bicycles, pedestrians, buses, electric cars, and mopeds at 65 sites across the city. Other assessments of bicycle and pedestrian volumes and Florida Department of Transportation (FDOT) programs focus solely on arterial and collector roads. This study deviates from the traditional approach to include numerous neighborhood sites as well. The results show the transportation mode volumes and percents at all sites and reveal the preferred paths for different modes. In addition, this study establishes a baseline to measure the effectiveness of future policies when counts are performed at the same times and dates.

## STUDY DESCRIPTION

This data collection includes nearly 100 thirty-minute traffic counts performed between August 2, 2004, and October 15, 2004. The ½ hour counts recorded the number of automobiles/motorcycles, taxis, trucks, buses, electric cars, mopeds, bicycles, and pedestrians. For low-volume roads, counts were performed for both traffic directions simultaneously. High-volume roads could only be counted one direction at a time. The other direction was counted on a subsequent day at the same time and the figures were added together.

The data collection form contains fields for date, time, location, weather, and any unusual events in the area such as a road closure. Special directions given to the person performing the count include:

- Automobiles and motorcycles are grouped together
- Old Town Trolleys and Conch Tour Trains count as buses as well as vans clearly labeled as group transportation vehicles (i.e. hotel vans)
- Trucks include vehicles larger than those used for personal transportation, such as ambulances and delivery trucks. Vans and pickups are classified as automobiles.

Neither the financial support nor the manpower was available to perform comprehensive, all day counts at multiple sites. Thus, counts were performed when the Bicycle and Pedestrian Coordinator staff and Planning Department staff were available. Because traffic counts were performed at different times on different days and multiple counts were not made at all sites, there is a wide margin of error in the study. However, it is felt that the study provides an accurate description of transportation volumes because of the numerous collection sites.

## **SITE SELECTION AND CHARACTERISTICS**

All of the traffic count locations along with the functional classification of roads in Key West are shown on *Map 1*. Many of the selected sites are based on locations that have historic data associated with them. The *Site Characteristics* section of this report describes the collection sites shown on *Map 1* along with the presence of a bike lane and whether the location was included in previous data collections. Nineteen of the sites have FDOT automobile counts that go back as far as 1980. Five sites match with the 1994 Bicycle Traffic Volume Count and five different sites match with the 1995 Southernmost Transportation Safety Study. This coordination with prior data collections creates the ability to compare the results of this study with historic data.

The sites with historic data include very few collector roads and do not include any neighborhood streets. It was felt that neglecting low-volume roads would not accurately portray transportation across the city. Thus, to achieve an accurate representation of the transportation system, a mixture of neighborhood, collector, and arterial roads spread evenly across the island was selected for inclusion in this study in addition to the sites that match with historic data.

## **MAJOR FINDINGS**

The major findings listed below are taken from an analysis of the charts, maps, and statistics in this report.

1. **Key West is multimodal.** Alternative transportation, defined as all modes except personal automobiles and trucks, represent 22% of all trips during the study period. This percent is high compared to other cities in the nation, yet the inability to expand the current road system to accommodate more automobiles means that the alternative transportation percent must rise in the future.
2. **Bicycle use rises dramatically as automobile volumes decrease.** Sixteen percent of the trips on neighborhood roads are taken on bicycles compared to 2% on arterial roads.
3. **Including low automobile volume roads in transportation studies is valuable.** Traffic counts that focus on heavily traveled roads fail to account for the roads preferred by bicyclists. Future transportation studies should account for this preference.
4. **Staples Avenue Bridge is effective.** It is significant that the only site across Salt Run Channel with high bicycle use is in the area leading to the Staples Bridge. This bridge has created a safe connection between New Town and Old Town and serves roughly 70 trips during the morning rush hour.
5. **New Town is dominated by the automobile.** Wide roads, long distances between origins and destinations, lack of sidewalks, high automobile volumes, and high automobile speeds all combine in New Town to reduce the feasibility of alternative transportation trips.
6. **Duval Street is dominated by alternative transportation.** The hourly volume of trips on Duval Street is comparable to Palm Avenue. The vast majority of the trips are taken

by bicyclists, pedestrians, and moped riders instead of the automobile domination experienced on Palm.

7. **More work must be done.** Although parts of Key West are multimodal, automobile traffic is increasing every day. Land use and transportation improvements will increase mobility options to residents and visitors across the island and make Key West a more enjoyable place to live and visit.

## **ANALYSIS**

The results presented below explain the maps, charts, and statistics used to analyze the traffic counts. Traditional transportation includes automobiles and trucks (motorcycles are grouped with automobiles) and alternative transportation includes taxis, buses, electric cars, mopeds, bicycles, and pedestrians.

### **City-Wide Percents**

- Duval Street, Duval crossings, Staples Avenue Bridge, and US 1 on Cow Key Bridge are excluded from this analysis because they are all dominated by certain transportation modes and, therefore, skew the results. The results for the excluded sites are shown in *Results by Road Type*.
- 22% of all trips island-wide are taken by alternative transportation.
- Moped use is twice as high as bicycle use.

### **Results by Road Type**

- Transportation counts in the past focused solely on major roads. The decision to include neighborhood roads in this study is justified by the significant difference between neighborhood roads and major roads.
- Bicycle trips increase exponentially as automobile volume decreases from arterial to neighborhood roads.
- Moped use is the same for arterial, collector, and neighborhood roads which shows the versatility of the moped.
- Staples Avenue Bridge keeps bicycles and pedestrians off of Flagler for commuting and recreation trips. The majority of the trips most likely replace trips that would be made by other modes while a portion of these trips, especially the recreation trips, would not have occurred without the bridge.
- Staples Avenue Bridge experiences little moped use.
- Converting Lower Duval to alternative transportation only for certain periods of the day would seem to have a minimal effect on overall trips since most are alternative. It is possible that many of the trips that are not alternative are cruising.
- US 1 at Cow Key Bridge carries very few alternative transportation trips. As the only road connection to the mainland, this result is expected.

### **Road Type Results by Area**

- Duval Street, Duval crossings, Staples Avenue Bridge, and US 1 on Cow Key Bridge were excluded from this analysis because they skew the results.
- Bicycle trips steadily increase in Old Town as automobile volume decreases from arterials to neighborhood roads.
- Pedestrian use is stable in Old Town at roughly 11%.
- Moped use is stable in Old Town at roughly 10%.

- Due to the differences in land use and road design, New Town and Old Town have entirely different transportation systems.
- Arterials in Old Town have the same mode split percent as neighborhood roads in New Town.

### **Bike Lane Usage in New Town**

- Analysis only includes New Town because not enough bike lanes exist in Old Town to make the results significant.
- Bike lanes are successful at capturing more bicycle trips than roads without bike lanes.
- Bicyclists may not use North Roosevelt as frequently because of the condition of the path. Repairing the path surface on North Roosevelt may increase the number of bicycle and pedestrian trips.
- South Roosevelt bicyclists are most likely riding for recreation while North Roosevelt bicyclists are probably trying to reach a destination.
- Flagler at Riviera Canal has more bicycle trips than expected since the Staples Bridge is so close. Do some bicyclists not know the bridge exists or is there another reason why they choose to ride on Flagler?

### **Highest Use for the Major Transportation Modes**

The *Highest Proportion of Use* analysis reveals locations where automobiles, bicycles, pedestrians, and mopeds have exceptionally high levels of use. These locations are where the percent use for each mode is in the top 16% (1 standard deviation). Each mode report contains the average percent use for all sites in the top right hand corner along with the standard deviation. The cutoff for records in the highest 16% is determined by adding the average to the standard deviation and selecting all records above this value.

*Map 2* shows all locations where automobiles, bicycles, pedestrians, and mopeds have the highest proportion of use. The statistics for each site are shown on the pages immediately following the map. Below are the findings from the *Highest Proportional of Use* analysis.

- Staples Avenue Bridge is excluded from the analysis because it skews the results.
- Pedestrian use is highest in the Duval Street corridor.
- Bicycle use is highest in the neighborhoods, especially around the cemetery.
- The easternmost bicycle site is a feeder road for the Staples Bridge.
- There are few moped sites, indicating that moped use is prevalent throughout the city (there are few sites where moped use is significantly higher than the average).
- Automobiles dominate New Town.

### **RESULTS FOR INDIVIDUAL SITES**

The purpose of this report is to reveal overall transportation network trends in Key West. Site-specific results will be valuable for identifying characteristics that encourage specific transportation mode use, but these detailed results fall beyond the scope of this study. The site results are located in the appendix and include:

**A-1 Count Times and Dates.** Reports each traffic count date, day of week, and beginning time.

**A-2 Average Results per Site.** Lists all sites by road type and shows the average number of trips counted for each mode during the ½ hour period along with the relative percent of a mode compared to the total number of trips.

**A-3 Detailed Results for All Sites.** Detailed individual charts and statistical tables for each traffic count.

**A-4 Alternative Transportation Rankings.** The percent use of alternative transportation is listed for each traffic count in descending order.

## CONCLUSIONS

This study shows the actual volumes of different transportation modes on the roads in Key West. The results indicate almost ¼ of all trips in Key West are taken by alternative transportation. Even though this number may seem high, automobile-related congestion is an increasing problem. Because the road system cannot be expanded, the only way to accommodate the increasing number of trips in Key West is to expand the capacity of the roads by converting trips from traditional transportation to alternative transportation.

The analysis of the Transportation Mode Split Study shows that:

- Alternative transportation users avoid roads with high automobile volumes and fast speeds. Reconfiguring these roads will help encourage more alternative transportation trips.
- Some sites in Key West, such as Southard and Fleming Streets, serve both alternative and traditional transportation needs. Repeating the positive characteristics of these sites at other facilities can expand the capacity of our road system and provide more transportation options.
- This report can be used to identify problem areas in the city by checking expected results versus observed results. The following is an example of how this method works.

*Map 2* shows that automobiles dominate the eastern end of the island. The only non-automobile location is on the route to the Staples Avenue Bridge. Thus, it appears that Salt Run Channel is a significant barrier to alternative transportation. The Staples Bridge added a very important connection, but more connections need to be created. North Roosevelt, the major transportation corridor in the city and the primary commercial destination, suffers from some factors that discourage pedestrian and bicycle use including:

- a. Mixed-use path is in a tragic state of disrepair. The potholes create a dangerous situation and most likely discourage people from using the facility.
- b. Resolve the dangerous conflict points, especially the free-flow right turn lane at Palm Avenue and the right-turns-on-red at the entrance to Walgreens and at Sigsbee Road.
- c. Crossing the road is difficult for pedestrians and bicycles. Look into making crossing the road easier for pedestrians and bicycles. Possible solutions include building an underpass at the Salt Run Channel Bridge and adding pedestrian refuges in the center lane.
- d. Add a sidewalk to the south side of the road.

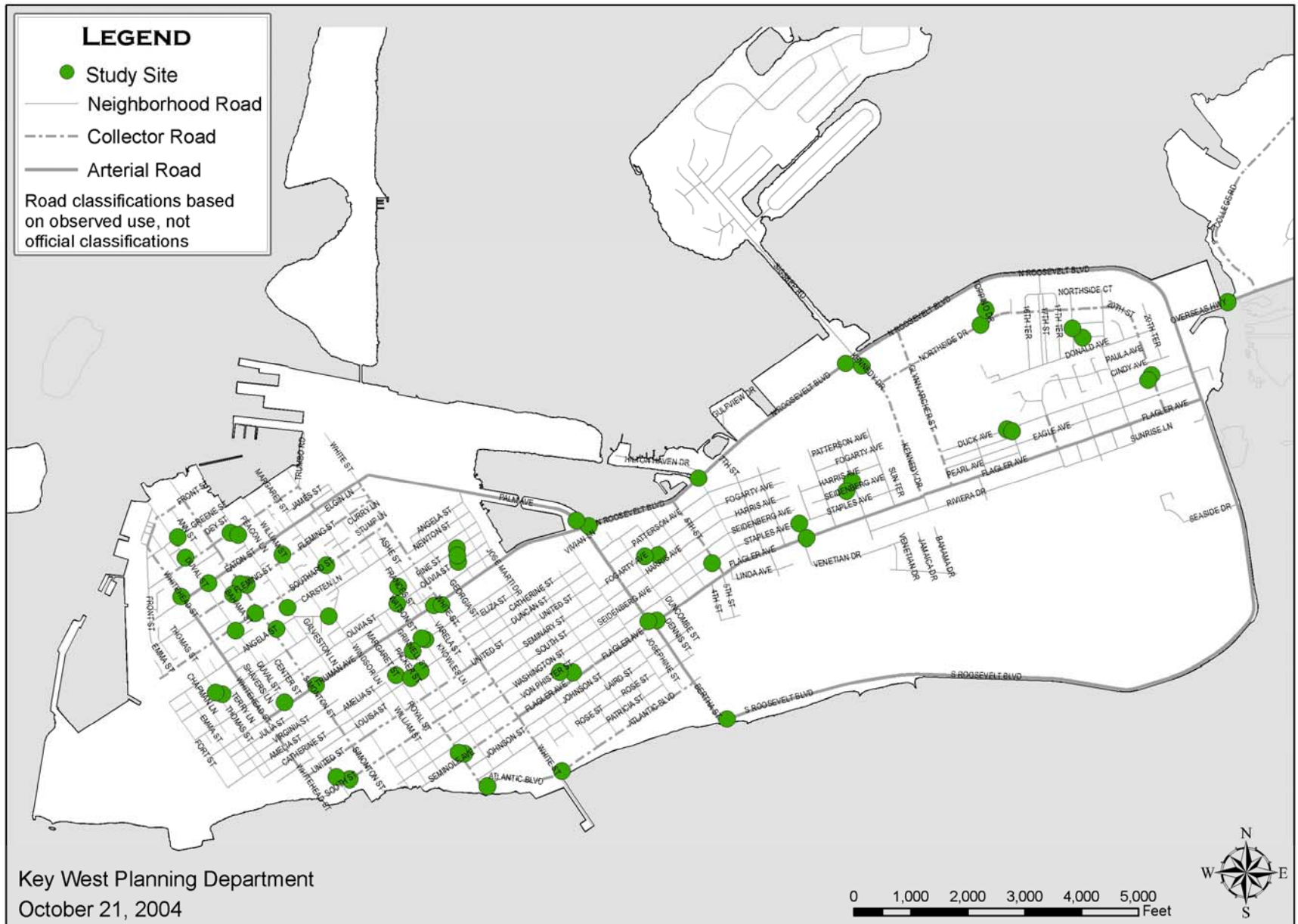
## FUTURE RESEARCH

Because of the lack of manpower and funds, this study is not comprehensive. Multiple counts should be performed at each site. Counts on the weekdays and early mornings and later afternoons will allow further comparison of transportation volumes. Counts during different times of the year will explain seasonal variation in transportation mode use.

Site characteristics must be collected and analyzed to determine why some roads and some parts of the city serve alternative transportation well. The significant characteristics of these sites can then be applied to sites that do not perform well.

Finally, site counts from this study can also be compared to historic data to identify trends.

# MAP 1. TRANSPORTATION MODE COUNT STUDY SITES



# Site Characteristics

## Transportation Mode Count Study



**Total Sites: 65**

### Arterial

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	First at Flagler	New Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Flagler at First (Bertha)	New Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Flagler at Riviera Canal	New Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	N Roosevelt at Hilton Haven	New Town	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	N Roosevelt at Kennedy	New Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	N Roosevelt at Palm	New Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Palm at N Roosevelt	New Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	S Roosevelt at Bertha	New Town	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Truman at Simonton	Old Town	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
01	Truman at White	Old Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Whitehead at Eaton	Old Town	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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**Collector**

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	20th at Duck	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Atlantic at Reynolds	Old Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Atlantic at White	Old Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Caroline at Elizabeth	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Flagler at Reynolds	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Fleming at Bahama	Old Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Fleming at Simonton	Old Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Kennedy at N Roosevelt	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Northside at Toppino	New Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Reynolds at Flagler	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Simonton at Fleming	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Southard at Margaret	Old Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Southard at Simonton	Old Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Toppino at Northside	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	White at Truman	Old Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Neighborhood Street

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	11th at Seidenberg	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	15th at Duck	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	18th at Pearlman	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	3rd and Fogarty	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Angela at Simonton	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Catherine at Grinnell	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Catherine at Margeret	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Duck at 15th	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Duck at 20th	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Elizabeth at Bakers Lane	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Elizabeth at Caroline	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Florida at Olivia	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Fogarty at Third	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Frances at Olivia	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Grinnell at Virginia	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Leon at Von Phister	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Margeret at Catherine	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Olivia at Florida	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Olivia at Frances	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Pearlman and 18th	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Petronia at Thomas	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Pine at Florida	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Seidenberg at 11th	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Staples at Fifth	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Thomas at Petronia	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Virginia at Watson	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Von Phister at Leon	New Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tuesday, October 26, 2004

Site Characteristics

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## Neighborhood Street

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
01	Watson at Virginia	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	William at Fleming	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
01	Windsor and Passover	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## Duval Street

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	Duval at Caroline	Old Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Duval at South	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Duval at Southard	Old Town	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Duval at Truman	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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## Roads Crossing Duval Street

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	Eaton at Duval	Old Town	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Greene at Duval	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	South at Duval	Old Town	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## Staples Avenue Bridge

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	Staples Avenue Bridge	New Town	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## US 1

	<i>Location:</i>	<i>Area</i>	<i>Bike Lane?</i>	<i>FDOT Traffic Count Site?</i>	<i>1994 Bicycle Study Site?</i>	<i>1995 Safety Study Site?</i>
1	US 1 on Cow Key Bridge	New Town	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

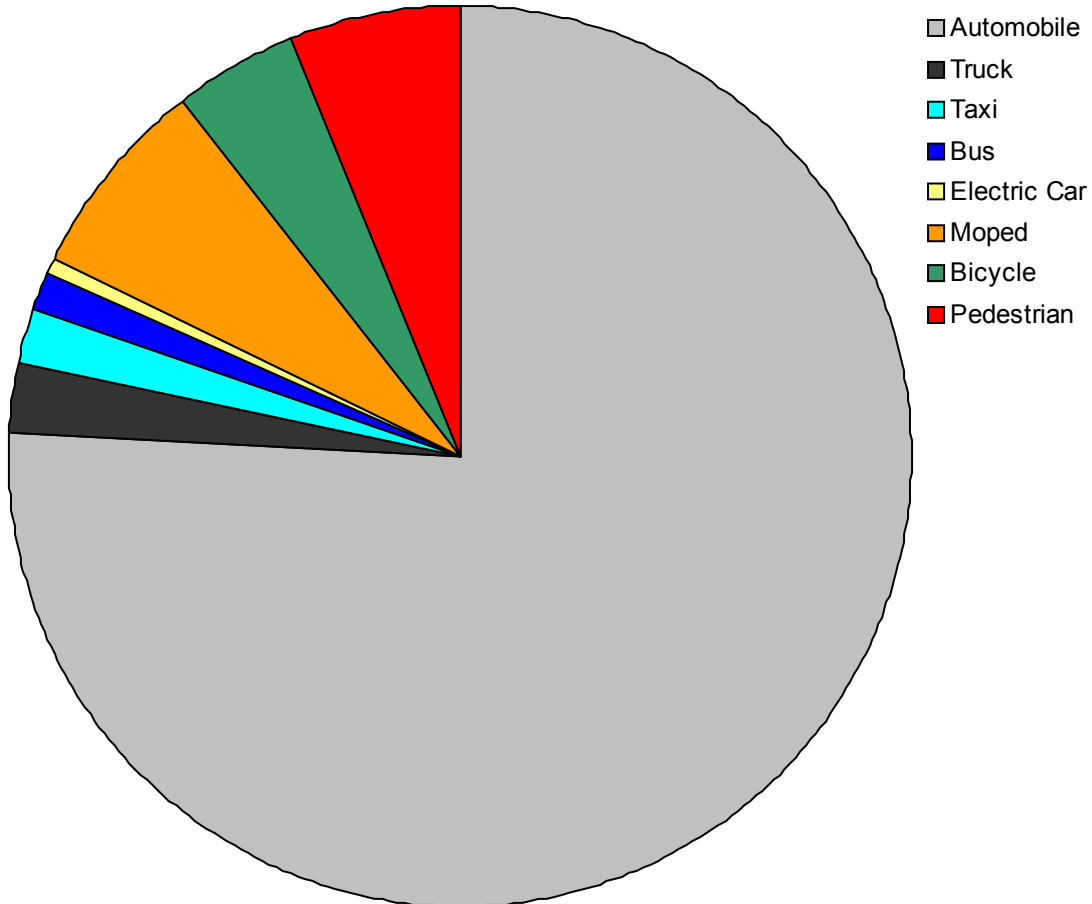
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# City-Wide Percents

## Transportation Mode Count Study



Entire City Except Duval Street, Duval Crossings, and Staples Bridge, and US 1



Mode Split Percents		Summary	
Automobile:	76%	Traditional	78%
Truck:	3%	Alternative	22%
Taxi:	2%	*Traditional is defined as automobiles and trucks.	
Bus:	1%	*Alternative is defined as all modes except automobiles and trucks.	
Electric Car:	1%	*Motorcycles are grouped with automobiles	
Moped:	7%		
Bicycle:	4%		
Pedestrian:	6%		
Total Trips:	100%	# of 1/2 Hour Data Collections:	77

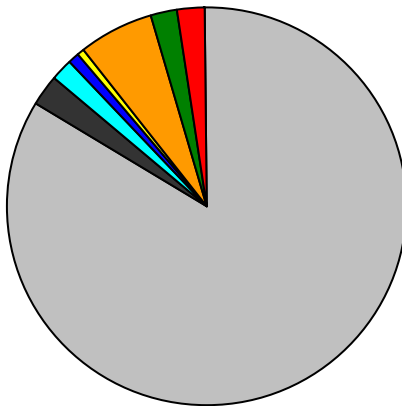
# Results by Road Type

## Transportation Mode Count Study



### Arterial

# of Collections: 20



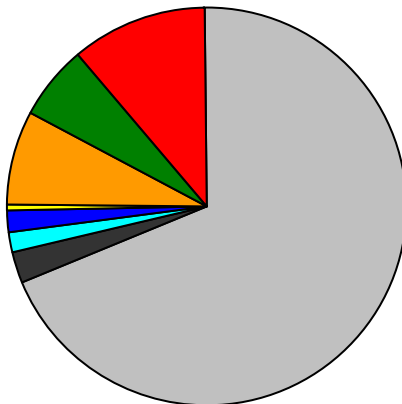
- Automobile
- Truck
- Taxi
- Bus
- Electric Car
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	509	84%
Truck:	17	3%
Taxi:	11	2%
Bus:	6	1%
Electric Car:	2	0%
Moped:	38	6%
Bicycle:	13	2%
Pedestrian:	14	2%
Total Trips:	609	100%

Summary Averages	
Traditional:	525
Alternative:	84
Summary %	
Traditional:	86%
Alternative:	14%
*Traditional is defined as automobiles and trucks.	
*Alternative is defined as all modes except automobiles and trucks.	
*Motorcycles are grouped with automobiles	

### Collector

# of Collections: 24



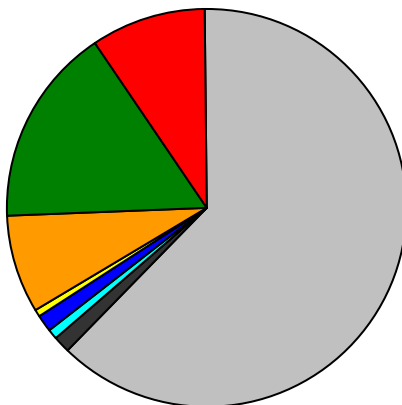
- Automobile
- Truck
- Taxi
- Bus
- Electric Car
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	123	69%
Truck:	4	2%
Taxi:	3	2%
Bus:	3	2%
Electric Car:	1	1%
Moped:	14	8%
Bicycle:	11	6%
Pedestrian:	20	11%
Total Trips:	180	100%

Summary Averages	
Traditional:	128
Alternative:	52
Summary %	
Traditional:	71%
Alternative:	29%
*Traditional is defined as automobiles and trucks.	
*Alternative is defined as all modes except automobiles and trucks.	
*Motorcycles are grouped with automobiles	

### Neighborhood Street

# of Collections: 33



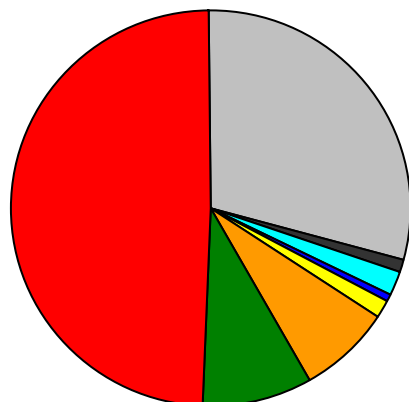
- Automobile
- Truck
- Taxi
- Bus
- Electric Car
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	26	62%
Truck:	1	1%
Taxi:	0	1%
Bus:	1	1%
Electric Car:	0	0%
Moped:	3	8%
Bicycle:	7	17%
Pedestrian:	4	9%
Total Trips:	42	100%

Summary Averages	
Traditional:	27
Alternative:	15
Summary %	
Traditional:	63%
Alternative:	37%
*Traditional is defined as automobiles and trucks.	
*Alternative is defined as all modes except automobiles and trucks.	
*Motorcycles are grouped with automobiles	

## Duval Street

# of Collections: 6



■ Automobile  
 ■ Truck  
 ■ Taxi  
 ■ Bus  
 ■ Electric Car  
 ■ Moped  
 ■ Bicycle  
 ■ Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	131	29%
Truck:	6	1%
Taxi:	8	2%
Bus:	3	1%
Electric Car:	6	1%
Moped:	34	7%
Bicycle:	41	9%
Pedestrian:	222	49%
Total Trips:	450	100%

### Summary Averages

Traditional: 137  
 Alternative: 313

### Summary %

Traditional: 30%  
 Alternative: 70%

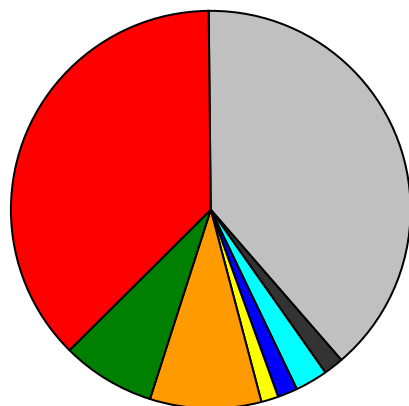
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

## Roads Crossing Duval Street

# of Collections: 5



■ Automobile  
 ■ Truck  
 ■ Taxi  
 ■ Bus  
 ■ Electric Car  
 ■ Moped  
 ■ Bicycle  
 ■ Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	96	39%
Truck:	4	2%
Taxi:	6	3%
Bus:	4	2%
Electric Car:	4	1%
Moped:	23	9%
Bicycle:	18	7%
Pedestrian:	94	38%
Total Trips:	249	100%

### Summary Averages

Traditional: 101  
 Alternative: 149

### Summary %

Traditional: 40%  
 Alternative: 60%

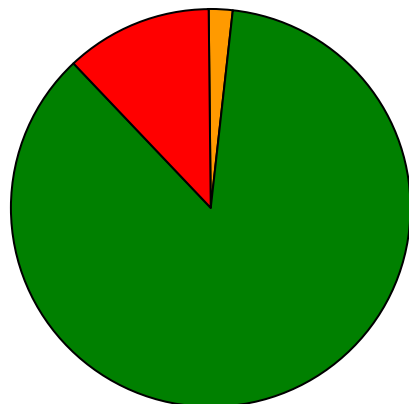
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

## Staples Avenue Bridge

# of Collections: 2



■ Automobile  
 ■ Truck  
 ■ Taxi  
 ■ Bus  
 ■ Electric Car  
 ■ Moped  
 ■ Bicycle  
 ■ Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	0	0%
Truck:	0	0%
Taxi:	0	0%
Bus:	0	0%
Electric Car:	0	0%
Moped:	1	2%
Bicycle:	22	86%
Pedestrian:	3	12%
Total Trips:	25	100%

### Summary Averages

Traditional: 0  
 Alternative: 25

### Summary %

Traditional: 0%  
 Alternative: 100%

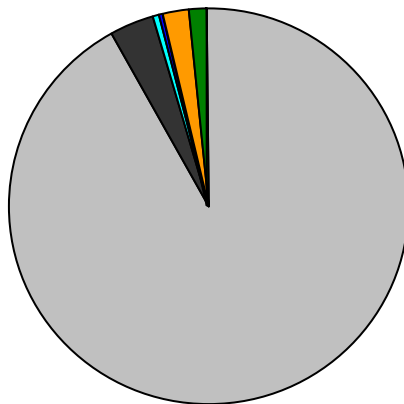
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

## US 1

# of Collections: 2



- Automobile
- Truck
- Taxi
- Bus
- Electric Car
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	1282	92%
Truck:	52	4%
Taxi:	5	0%
Bus:	5	0%
Electric Car:	1	0%
Moped:	31	2%
Bicycle:	19	1%
Pedestrian:	1	0%
<b>Total Trips:</b>	<b>1394</b>	<b>100%</b>

Summary Averages	
Traditional:	1333
Alternative:	61
Summary %	
Traditional:	96%
Alternative:	4%
*Traditional is defined as automobiles and trucks.	
*Alternative is defined as all modes except automobiles and trucks.	
*Motorcycles are grouped with automobiles	

# Road Type Results by Area

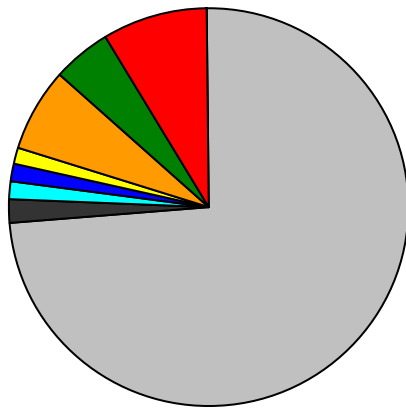
## Transportation Mode Count Study



### Old Town- Duval Street and Duval Crossings Excluded

#### Arterial

# of Collections: 3



- Auto
- Truck
- Taxi
- Bus
- ElectricCar
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	292	74%
Truck:	8	2%
Taxi:	5	1%
Bus:	5	1%
Electric Car:	6	1%
Moped:	28	7%
Bicycle:	18	5%
Pedestrian:	35	9%
Total Trips:	396	100%

#### Summary Averages

Traditional: 300  
Alternative: 96

#### Summary %

Traditional: 76%  
Alternative: 24%

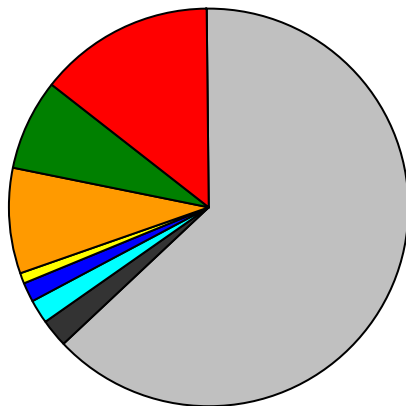
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

#### Collector

# of Collections: 11



- Auto
- Truck
- Taxi
- Bus
- ElectricCar
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	119	63%
Truck:	4	2%
Taxi:	4	2%
Bus:	3	2%
Electric Car:	1	1%
Moped:	16	9%
Bicycle:	14	8%
Pedestrian:	27	14%
Total Trips:	189	100%

#### Summary Averages

Traditional: 123  
Alternative: 66

#### Summary %

Traditional: 65%  
Alternative: 35%

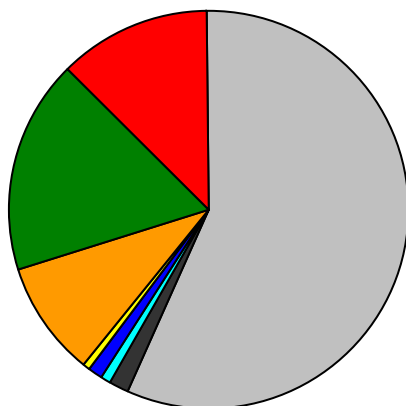
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

#### Neighborhood Street

# of Collections: 18



- Auto
- Truck
- Taxi
- Bus
- ElectricCar
- Moped
- Bicycle
- Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	27	56%
Truck:	1	2%
Taxi:	0	1%
Bus:	1	1%
Electric Car:	0	1%
Moped:	5	9%
Bicycle:	9	18%
Pedestrian:	6	13%
Total Trips:	49	100%

#### Summary Averages

Traditional: 28  
Alternative: 20

#### Summary %

Traditional: 58%  
Alternative: 42%

\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

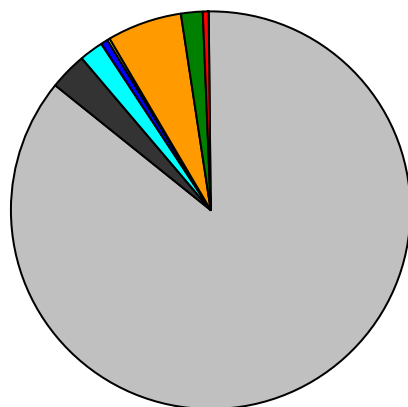
\*Motorcycles are grouped with automobiles



## New Town- Staples Bridge and US 1 Excluded

### Arterial

# of Collections: 7



Auto  
 Truck  
 Taxi  
 Bus  
 ElectricCar  
 Moped  
 Bicycle  
 Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	602	86%
Truck:	20	3%
Taxi:	13	2%
Bus:	6	1%
Electric Car:	1	0%
Moped:	43	6%
Bicycle:	11	2%
Pedestrian:	5	1%
Total Trips:	701	100%

#### Summary Averages

Traditional: 622  
Alternative: 78

#### Summary %

Traditional: 89%  
Alternative: 11%

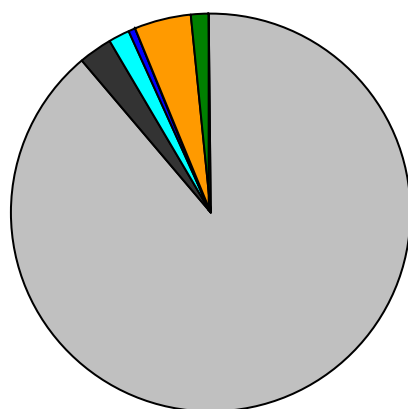
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

### Collector

# of Collections: 4



Auto  
 Truck  
 Taxi  
 Bus  
 ElectricCar  
 Moped  
 Bicycle  
 Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	137	89%
Truck:	5	3%
Taxi:	3	2%
Bus:	1	1%
Electric Car:	0	0%
Moped:	7	5%
Bicycle:	2	1%
Pedestrian:	0	0%
Total Trips:	154	100%

#### Summary Averages

Traditional: 141  
Alternative: 13

#### Summary %

Traditional: 92%  
Alternative: 8%

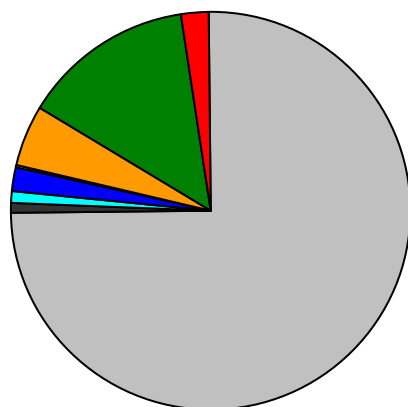
\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

### Neighborhood Street

# of Collections: 12



Auto  
 Truck  
 Taxi  
 Bus  
 ElectricCar  
 Moped  
 Bicycle  
 Pedestrian

Average Trips per 1/2 Hour		
	#	%
Automobile:	24	75%
Truck:	0	1%
Taxi:	0	1%
Bus:	1	2%
Electric Car:	0	0%
Moped:	2	5%
Bicycle:	5	14%
Pedestrian:	1	2%
Total Trips:	32	100%

#### Summary Averages

Traditional: 24  
Alternative: 8

#### Summary %

Traditional: 76%  
Alternative: 24%

\*Traditional is defined as automobiles and trucks.

\*Alternative is defined as all modes except automobiles and trucks.

\*Motorcycles are grouped with automobiles

# Bike Lane Usage in New Town

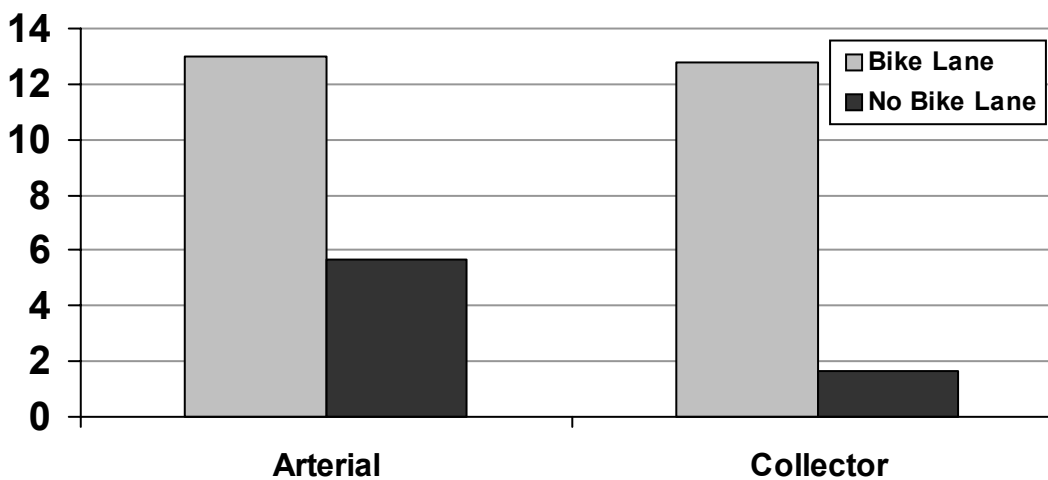
## Transportation Mode Count Study



### Average Bicycle Traffic per 30-minute Count

*New Town Collectors and Arterials Only*

*Staples Avenue Bridge Classified as a Bicycle Collector*

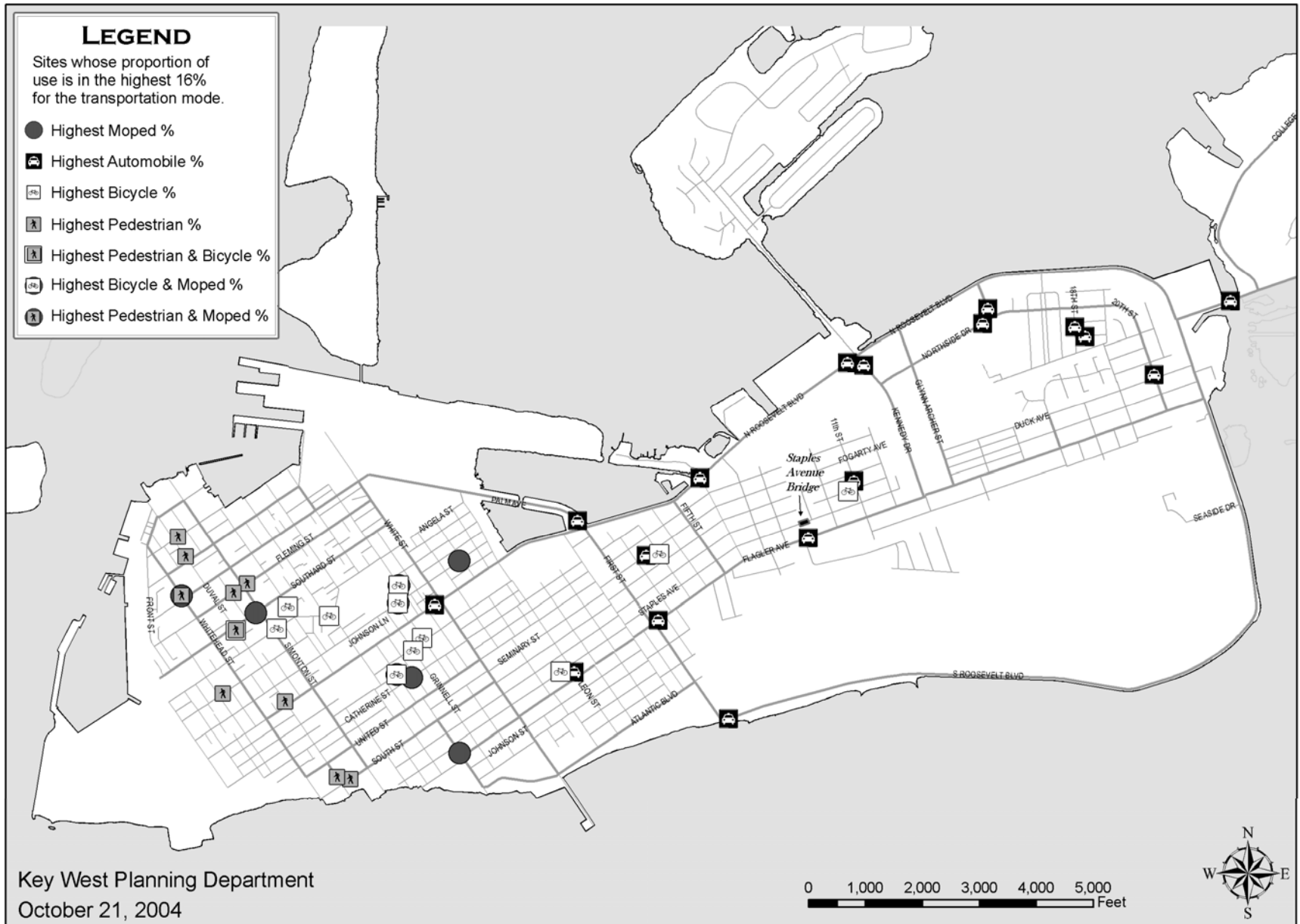


	Bike Lane	No Bike Lane
Arterial	13	6
Collector	13	2
Overall	26	7

Arterial Sites with Bike Lanes	Avg Bikes	Arterial Sites without Bike Lanes	Avg Bikes	Collector Sites with Bike Lanes	Avg Bikes	Collector Sites without Bike Lanes	Avg Bikes
N Roosevelt at Hilton Haven	20	First at Flagler	5	Northside at Toppino	4	20th at Duck	0
N Roosevelt at Kennedy	20	Flagler at First (Bertha)	2	Staples Avenue Bridge	22	Kennedy at N Roosevelt	4
Palm at N Roosevelt	9	Flagler at Riviera Canal	10	<b>Average:</b>	<b>13</b>	Toppino at Northside	1
S Roosevelt at Bertha	10	<b>Average:</b>	<b>6</b>			<b>Average:</b>	<b>2</b>
<b>Average:</b>	<b>15</b>						

# MAP 2. HIGHEST PROPORTION OF USE

SITES WHERE THE PERCENTS ARE THE HIGHEST FOR EACH MAJOR MODE



# Highest Automobile Proportion

## Transportation Mode Count Study



*Defined as sites in the top 16% (1 standard deviation)*

*Staples Avenue Bridge Excluded from Analysis*

**Average for All Sites: 65%**

**Standard Deviation: 19%**

**Cutoff Percent: 84%**

<i>Location</i>	<i>Road Type</i>	<i>Collection Details</i>			<i>Automobile Percentage</i>
		<i>Begin Time</i>	<i>Date</i>	<i>Day of Week</i>	
1 20th at Duck	Collector	1:35 PM	9/30/2004	Thursday	93%
2 11th at Seidenberg	Neighborhood Street	10:50 AM	10/4/2004	Monday	93%
3 18th at Pearlman	Neighborhood Street	11:40 AM	10/1/2004	Friday	92%
4 US 1 on Cow Key Bridge	US 1	3:00 PM	8/2/2004	Monday	92%
5 Toppino at Northside	Collector	12:25 PM	10/1/2004	Friday	92%
6 US 1 on Cow Key Bridge	US 1	12:00 PM	8/9/2004	Monday	92%
7 Leon at Von Phister	Neighborhood Street	1:40 PM	10/6/2004	Wednesday	91%
8 N Roosevelt at Kennedy	Arterial	12:00 PM	8/16/2004	Monday	90%
9 N Roosevelt at Kennedy	Arterial	4:30 PM	8/29/2004	Sunday	89%
10 S Roosevelt at Bertha	Arterial	12:00 PM	8/6/2004	Friday	88%
11 Kennedy at N Roosevelt	Collector	4:00 PM	8/29/2004	Sunday	88%
12 N Roosevelt at Hilton Haven	Arterial	2:25 PM	10/5/2004	Tuesday	87%
13 Truman at White	Arterial	2:25 PM	10/14/2004	Thursday	87%
14 Flagler at Riviera Canal	Arterial	1:25 PM	10/8/2004	Friday	87%
15 Northside at Toppino	Collector	1:00 PM	10/1/2004	Friday	86%
16 Fogarty at Third	Neighborhood Street	9:15 AM	10/4/2004	Monday	86%
17 Pearlman and 18th	Neighborhood Street	11:40 AM	10/1/2004	Friday	86%
18 Flagler at First (Bertha)	Arterial	3:00 PM	9/22/2004	Wednesday	85%
19 Palm at N Roosevelt	Arterial	11:40 AM	10/12/2004	Tuesday	84%

# Highest Bicycle Proportion

## Transportation Mode Count Study



*Defined as sites in the top 16% (1 standard deviation)*

*Staples Avenue Bridge Excluded from Analysis*

**Average for All Sites: 10%**

**Standard Deviation: 8%**

**Cutoff Percent: 18%**

<i>Location</i>	<i>Road Type</i>	<i>Collection Details</i>			<i>Bicycle Percentage</i>
		<i>Begin Time</i>	<i>Date</i>	<i>Day of Week</i>	
1 <b>Olivia at Frances</b>	Neighborhood Street	3:00 PM	9/27/2004	Monday	<b>38%</b>
2 <b>Grinnell at Virginia</b>	Neighborhood Street	11:00 AM	9/28/2004	Tuesday	<b>35%</b>
3 <b>Frances at Olivia</b>	Neighborhood Street	4:30 PM	8/28/2004	Saturday	<b>34%</b>
4 <b>Watson at Virginia</b>	Neighborhood Street	11:00 AM	9/28/2004	Tuesday	<b>33%</b>
5 <b>Von Phister at Leon</b>	Neighborhood Street	7:55 AM	10/5/2004	Tuesday	<b>26%</b>
6 <b>Olivia at Frances</b>	Neighborhood Street	4:30 PM	8/28/2004	Saturday	<b>25%</b>
7 <b>Elizabeth at Bakers Lane</b>	Neighborhood Street	10:45 AM	9/29/2004	Wednesday	<b>24%</b>
8 <b>Frances at Olivia</b>	Neighborhood Street	8:15 AM	9/28/2004	Tuesday	<b>22%</b>
9 <b>Angela at Simonton</b>	Neighborhood Street	11:20 AM	9/30/2004	Thursday	<b>22%</b>
10 <b>Duval at Southard</b>	Duval Street	12:00 PM	8/26/2004	Thursday	<b>21%</b>
11 <b>Margeret at Catherine</b>	Neighborhood Street	2:00 PM	8/29/2004	Sunday	<b>20%</b>
12 <b>Windsor and Passover</b>	Neighborhood Street	10:40 AM	9/28/2004	Tuesday	<b>19%</b>
13 <b>3rd and Fogarty</b>	Neighborhood Street	9:45 AM	10/4/2004	Monday	<b>18%</b>
14 <b>Seidenberg at 11th</b>	Neighborhood Street	10:20 AM	10/4/2004	Monday	<b>18%</b>

# Highest Pedestrian Proportion

## Transportation Mode Count Study



*Defined as sites in the top 16% (1 standard deviation)*

*Staples Avenue Bridge Excluded from Analysis*

**Average for All Sites: 12%**

**Standard Deviation: 15%**

**Cutoff Percent: 28%**

<i>Location</i>	<i>Road Type</i>	<i>Collection Details</i>			<i>Pedestrian Percentage</i>
		<i>Begin Time</i>	<i>Date</i>	<i>Day of Week</i>	
1 Duval at Caroline	Duval Street	12:00 PM	8/31/2004	Tuesday	64%
2 Greene at Duval	Roads Crossing Duval Street	6:30 PM	8/28/2004	Saturday	60%
3 Petronia at Thomas	Neighborhood Street	12:30 PM	8/29/2004	Sunday	55%
4 Duval at Southard	Duval Street	12:00 PM	8/28/2004	Saturday	52%
5 Duval at South	Duval Street	1:10 PM	10/5/2004	Tuesday	45%
6 Duval at Truman	Duval Street	10:55 AM	9/24/2004	Friday	42%
7 Fleming at Bahama	Collector	12:05 PM	9/28/2004	Tuesday	41%
8 Duval at South	Duval Street	9:45 AM	10/1/2004	Friday	37%
9 South at Duval	Roads Crossing Duval Street	9:45 AM	10/1/2004	Friday	35%
10 Duval at Southard	Duval Street	12:00 PM	8/26/2004	Thursday	35%
11 Whitehead at Eaton	Arterial	10:30 AM	8/24/2004	Tuesday	34%
12 Fleming at Simonton	Collector	1:00 PM	8/28/2004	Saturday	30%

# Highest Moped Proportion

## Transportation Mode Count Study



*Defined as sites in the top 16% (1 standard deviation)*

*Staples Avenue Bridge Excluded from Analysis*

**Average for All Sites: 7%**

**Standard Deviation: 4%**

**Cutoff Percent: 12%**

<i>Location</i>	<i>Road Type</i>	<i>Collection Details</i>			<i>Moped Percentage</i>
		<i>Begin Time</i>	<i>Date</i>	<i>Day of Week</i>	
1 <b>Margeret at Catherine</b>	Neighborhood Street	2:00 PM	8/29/2004	Sunday	<b>20%</b>
2 <b>Olivia at Florida</b>	Neighborhood Street	11:45 AM	9/28/2004	Tuesday	<b>17%</b>
3 <b>Whitehead at Eaton</b>	Arterial	12:00 PM	8/29/2004	Sunday	<b>17%</b>
4 <b>Olivia at Frances</b>	Neighborhood Street	4:30 PM	8/28/2004	Saturday	<b>16%</b>
5 <b>Southard at Simonton</b>	Collector	10:15 AM	7/22/2004	Thursday	<b>15%</b>
6 <b>Reynolds at Flagler</b>	Collector	3:00 PM	9/25/2004	Saturday	<b>14%</b>
7 <b>Whitehead at Eaton</b>	Arterial	10:30 AM	8/24/2004	Tuesday	<b>14%</b>
8 <b>Fleming at Simonton</b>	Collector	12:00 PM	9/3/2004	Friday	<b>13%</b>
9 <b>Southard at Simonton</b>	Collector	12:00 PM	9/7/2004	Tuesday	<b>13%</b>
10 <b>Catherine at Margeret</b>	Neighborhood Street	2:00 PM	8/29/2004	Sunday	<b>13%</b>
11 <b>Frances at Olivia</b>	Neighborhood Street	8:15 AM	9/28/2004	Tuesday	<b>12%</b>
12 <b>Atlantic at Reynolds</b>	Collector	3:00 PM	8/28/2004	Saturday	<b>12%</b>
13 <b>Catherine at Grinnell</b>	Neighborhood Street	12:05 PM	9/29/2004	Wednesday	<b>12%</b>
14 <b>Frances at Olivia</b>	Neighborhood Street	4:30 PM	8/28/2004	Saturday	<b>12%</b>